

SAFETY DATA SHEET

Quantum Technical Services Ltd.

Section 1. Product and Company Identification

Product Name **ILLUSTRIUM™ M1155 Resin**

Manufacturer Quantum Technical Services Ltd. (Dba Quantum Chemical)
 15 Riel Drive
 St. Albert, AB, Canada T8N 3Z2
 Tel: (780) 458-3355 (non-emergency phone number)
 Fax: (780) 458-2852
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Chemical Emergencies For 24-Hour Emergency call Canutec at 613.996.6666

Section 2. Hazards Identification

OSHA/HCS Status: This material is considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification of the Substance or Mixture:	Acute Toxicity: Oral	Category 4
	Acute Toxicity: Dermal	Category 4
	Skin Corrosion/Irritation	Category 1B
	Serious Eye Damage/Eye Irritation	Category 1
	Specific Target Organ Toxicity (repeated exposure)	Category 2
	Acute Aquatic Toxicity	Category 3
	Chronic Aquatic Toxicity	Category 3
GHS Label Elements: Pictograms:	Skin Sensitization	Category 1



Signal Word: **DANGER**

Hazard Statements:

- H312 Harmful in contact with skin.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H320 Causes eye irritation.
- H402 Harmful to aquatic life.
- H412 Harmful to aquatic life with long-lasting effects.

Precautionary Statements:

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash with plenty of soap and water thoroughly after handling.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P260 Do not breathe dust or mist.

Response:	P303+P361+P352 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P312 Call a POISON CENTER/doctor if you feel unwell.
Storage:	P405 Store locked up.
Disposal:	P501: Dispose of contents/containers in accordance with local/regional/national/international regulations.
Hazards not otherwise classified.	
Emergency Overview:	Danger. Corrosive liquid. Toxic if absorbed through skin. Prolonged or repeated contact may result in dermatitis. Causes skin burns. Causes eye burns. May be harmful if inhaled. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Harmful if swallowed.

Section 3. Composition and Ingredient Information

Ingredients	%	ACGHI TLV	C.A.S. #	LD ₅₀	LC ₅₀
Alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2 ethanediyl))	30-60	N/A	9046-10-0	Oral, Rat 2885 mg/kg	Inhalation , Rat >0.74 mg/L 8 hours, no mortality
Modified Isophoronediamine	30-60	N/D	90530-15-7	Oral, Rat <2000 mg/kg	N/D
Titanium Dioxide	10-30	10 mg/m ³	13463-67-7	Oral, Rat >5000 mg/kg	Inhalation, Rat 6.82 mg/L (dust)

Note: Ingredient content ranges are given to protect intellectual property.

Section 4. First Aid Measures

Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Obtain immediate medical attention.
Skin Contact:	In case of contact, immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse. Obtain immediate medical attention.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.
Ingestion:	If ingested, dilute with water. Consult a physician. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Section 5. Fire Fighting Measures

Extinguishing Media:	Water spray, dry powder, alcohol resistant foam, carbon dioxide.
Unusual Hazards:	Toxic gasses, vapours.
Sensitivity to Mechanical Impact:	Not expected to be sensitive to mechanical impact.
Sensitivity to Static Discharge:	Not expected to be sensitive to static discharge.
Special Fire Fighting Procedures:	Cool fire-exposed containers with water spray. Heat will cause pressure buildup and may cause explosive rupture. Firefighter should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

Section 6. Accidental Release Measures

Leak/Spill:	Spills should be contained, solidified, and placed in suitable containers for disposal in a licensed facility. Wear respiratory protection and protective clothing. Provide adequate ventilation. This product is an alkaline. Before discharging sewage into treatment plants neutralization is generally required. It can be mechanically removed from water due to insolubility.
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Section 7. Handling and Storage

Handling Procedures:	Avoid skin and eye contact. Avoid breathing fumes. Remove contaminated clothing before reuse. Maintain good personal hygiene.
Storage Needs:	Store in a cool and dry place, for product integrity. Store in tightly sealed container and protect from moisture and foreign materials. Keep container closed when not in use. Protect from acids and acid forming substances.

Section 8. Exposure Controls and Personal Protection

Protective Equipment:	
Eye/Type:	Liquid chemical goggles. Contact lenses should not be worn.
Respiratory/Type:	At least an air-purifying respirator equipped with an organic vapor cartridge and particulate pre-filters must be worn.
Gloves/Type:	Rubber or plastic gloves. Butyl rubber gloves. Nitrile rubber. A barrier cream. Practice good hygiene; wash thoroughly before handling any food.
Clothing/Type:	Wear adequate protective clothes.
Other/Type:	Eyewash fountain. Emergency shower should be in close proximity.
Ventilation Requirements:	Ventilate adequately.

Section 9. Physical and Chemical Properties

Physical State:	Liquid.
Odor:	Amine.
Specific Gravity:	N/D.
Odor Threshold (ppm):	Not applicable.
Vapor Pressure (mm Hg):	N/D.
Vapor Density (Air=1):	N/D.
Evaporation Rate:	N/D.
Boiling Point:	N/D.
pH:	>9
Solubility in Water:	N/D.
Freezing Point (° C):	N/D.

Section 10. Stability and Reactivity

Incompatibility:	Acids, isocyanates and oxidizing agents.
Reactivity Conditions:	See “incompatibility”.
Hazardous Products of Decomposition:	Possible decomposition products, toxic gases/fumes, CO, CO ₂ , and nitrous oxides.

Section 11. Toxicological Information

No data exists for product itself.

Component Acute Toxicity:

Alpha-(2-Aminomethylethyl) -omega-(2-aminomethylethoxy) -poly(oxy(methyl-1,2 ethanediyl))	Oral, Rat LD50 2885 mg/kg	Inhalation , Rat LC50 >0.74 mg/L 8 hrs, no mortality	Dermal, Rabbit LD50 2980 mg/kg
Modified Isophoronediamine	Oral, Rat <2000 mg/kg	N/D	N/D
Titanium Dioxide	Oral, Rat >5000 mg/kg	Inhalation, Rat LC50 6.82 mg/L (dust)*	N/D

*Toxicity levels of TiO₂ are for respirable dust, in this product all TiO₂ powder is fully dispersed in liquid and does not pose any respiratory risk.

Mutagenicity:

Alpha-(2-Aminomethylethyl) -omega-(2-aminomethylethoxy) -poly(oxy(methyl-1,2 ethanediyl))	Negative in mammalian cells or bacteria.
Modified Isophoronediamine	Not Available
Titanium Dioxide	Negative in mammalian cells or bacteria

Carcinogenicity:

Alpha-(2-Aminomethylethyl) -omega-(2-aminomethylethoxy) -poly(oxy(methyl-1,2 ethanediyl))	No data available.
Modified Isophoronediamine	Not available.
Titanium Dioxide	IARC lists titanium dioxide powder as Group 2B (possibly carcinogenic to humans). This reflects exposure to respirable dust. As all TiO ₂ in this product is fully dispersed in liquid it is our opinion that it poses no carcinogenic risk.

Reproductive Toxicity:

Alpha-(2-Aminomethylethyl) -omega-(2-aminomethylethoxy) -poly(oxy(methyl-1,2 ethanediyl))	No indication of a fertility impairing effect.
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Teratogenicity:

Alpha-(2-Aminomethylethyl) -omega-(2-aminomethylethoxy) -poly(oxy(methyl-1,2 ethanediyl))	No indications of a developmental toxic/teratogenic were seen in animal studies.
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Sensitization:

Alpha-(2-Aminomethylethyl) -omega-(2-aminomethylethoxy) -poly(oxy(methyl-1,2 ethanediyl))	No data available.
Modified Isophoronediamine	Caused skin sensitization in animal studies.

Section 12. Ecological Information

No data available for product itself.

Toxicity:	Fish	Daphnia	Algae
Alpha-(2-Aminomethylethyl)	LC 50 (96 h) >15 mg/l	EC50 (48 h) 80 mg/l	
-omega-(2-aminomethylethoxy)	Oncorhynchus mykiss		
-poly(oxy(methyl-1,2 ethanediyl))			

Modified Isophoronediamine	No data	No data
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Titanium Dioxide	LC 50 (96-hour) >1000 mg/L; EC50 (48-hour) >1000 mg/L; EC50(72 h) 61 mg/l Fathead minnow
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Biodegradability:

Alpha-(2-Aminomethylethyl)	Not readily biodegradable (by OECD criteria).
-omega-(2-aminomethylethoxy)	
-poly(oxy(methyl-1,2 ethanediyl))	

Bioaccumulative Potential:

Alpha-(2-Aminomethylethyl)	No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).
-omega-(2-aminomethylethoxy)	
-poly(oxy(methyl-1,2 ethanediyl))	

Mobility in Soil:

Alpha-(2-Aminomethylethyl)	Adsorption to solid phase is not expected.
-omega-(2-aminomethylethoxy)	
-poly(oxy(methyl-1,2 ethanediyl))	

Section 13. Disposal Considerations

Waste Disposal:	In accordance with municipal, provincial and federal regulations. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch.
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Section 14. Transport Information

T.D.G. Classification:	Amine, liquid, corrosive, N.O.S., Class 8, UN2735, Packing Group III.
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US DOT:

Hazard Class:	8.
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Packing Group:	II.
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ID Number:	UN 2735.
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Hazard Label:	8.
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Proper Shipping Name:	Amines, Liquid, Corrosive, N.O.S. (contains polyetherdiamine).
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This product is classified as Class 8 because a major component is Class 8.

Section 15. Regulatory Information

TSCA:	All components listed or exempt.
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Section 16. Other Information

Revision Date:	May 4, 2023
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